

PO No	Supplier Item No	Line Ref No	Terms Purchased Item	Description	For Part No	Project ID	Order Date	Received Qty	Accounting Job No	Customer No	Status	Receive Date	Price/Unit	Agling Days
PO039511	1	Net 30	M34TR0.500W.034	340 Round Tube, 500 X .035W :	MATERIAL: AISI 304/16 SS		80	4/12/2018	80	SO60102	Stock	4/11/2018	\$ 1.84 / pcs	0
	2		M4130NT0.750W.049	130 Round Tube, 750 X .049W :	MATERIAL: AISI 1430N STEEL		20		SO60103	Stock	4/11/2018	\$ 11.48 / pcs	0	
	3		M4130NT0.750W.068	130 Round Tube, 750 X .068W :	MATERIAL: AISI 1430N STEEL		20		SO60104	Stock	4/11/2018	\$ 5.03 / pcs	0	

Purchasing Receipts

PURCHASE ORDER
PO039511

632-5200
(613) 632-5200
6A 1K7
270 Aberdeen St
Bart Aerospace Ltd.
Markham, ON
Canada

DART
AEROSPACE

Supplier: TW001-VU TWA-1 E-MAIL GU PO No: PO039511

APR 6 2018
E-MAILED

4/4/18
4/12/18
F0039911

Use Date:
0 Date:
0 N8:

Fax: 585 768 5601

1270 Aberdeen Street
Hawkesbury
ON
K6A 1K7 Canada
Phone: 613-632-5200

Line	Supplier	Part No	Part	Item
1	M304TR0.500W.035			

2 M4130NT0.750W.049

4 M6061T6T0.750W.125

Line Item	Part	Supplier Part No	Description	Status	Due Date	Received Date	Quantity	Quantity	Balance	Unit Price	Extended Price
1	M304TR0.500W.035	304 Round Tube .500 X .035W	: MATERIAL: AISI 304/316 SS SEMLESS ROUND TUBING AS PER ASTM A213 OR	304 Round Tube .500 X .035W	4/12/18	80 pcs	0 pcs	80 pcs	\$1.8422/pcs	\$147.38	
2	M413ONT0.750W.049	4130 Round Tube .750 X .049W	: MATERIAL: AISI 4130N STEEL TUBING AS PER MIL-T-6736 OR	4130 Round Tube .750 X .049W	4/12/18	20 pcs	0 pcs	20 pcs	\$11.4754/pcs	\$229.51	
3	M413ONT0.750W.083	4130 Round Tube .750 X .083W	: MATERIAL: AISI 4130N STEEL TUBING AS PER MIL-T-6736 OR	4130 Round Tube .750 X .083W	4/12/18	20 pcs	0 pcs	20 pcs	\$5.03/pcs	\$100.60	
4	M6061TT6T0.750W.125	6061-T6 Round Tube .750 X .125W	: MATERIAL: 6061-T6 STEEL TUBING AS PER MIL-T-6736 OR	6061-T6 Round Tube .750 X .125W	4/12/18	12 pcs	0 pcs	12 pcs	\$9.20/pcs	\$110.40	

Plex 4/18 3:15 PM dari lavoice.chantra

Plex 4/4/18 3:15 PM darl.lavie.chatnai

Order Notes	Purchase Order	Procurement Quality Clauses	A005 height of entry	A012 chemical and physical test report	A016 personnel qualification	A017 raw material identification (as applicable)	A026 certification of material control	A041 quality management system	A042 draft notification by supplier	A043 retention of quality documents	A048 counterfeit parts avoidance, detection, mitigation and disposition program	A049 supplier awareness	Terms & Condition of Purchasing(Suppliers) And Procurement Quality Clauses are an integral part of our AS9100 requirements. To learn in detail, please visit www.darlerspace.com for further explanation.
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Packing Slip



ONeil High Performance Metals Group

DATE SHIPPED

DATE FILED

A standard linear barcode is located at the bottom of the page, spanning most of the width. It is used for tracking and identification of the document.

ONeil High-Performance Metals Group

METALS
TM

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These commodities have been exported from the United States in accordance with the U.S. export control laws, except that contraband items are prohibited by law.

"TW Metals Certificates that the material supplied on this purchase order and contained in the heat/lot number referenced above has been manufactured in the heat/lot number referenced above with the material specified, and tested in accordance with the material specification. These records are on file at TW Metals. Packaging material for shipment to Europe and China consists of manufactured wood products and complies with the European, mergency measures for confidential non-manufactured wood packing material".

"CERTIFICATE OF CONFORMANCE"

“TW Metals MSDS data is available on our web site at www.twmetals.com. MSDS data can be found under the Technical Resources Tab, Product Statistics. MSDS data and the TW Metals MSDS heading. If you do not have web site access you may telephone 610-458-1300 and we will mail or fax a copy of our current MSDS data to your location.”

SOLD TO:	34.541 REG. DATE: 04/12/18 CONFIRMED	CUST NUMBER: 1203820 NET WGT:	DART AEROSPACE LTD 1270 ABERDEEN ST HAWKSBURY ON CANADA	SHIP TO: DART AEROSPACE LTD 1270 ABERDEEN ST HAWKSBURY ON ONTARIO CANADA CN K6A 1K7	SALES PERSON: DONNA SMALLEY NET 30 DAYS 27 ENGLEHARD DRIVE MONROE TWP NJ 08831	F.O.B.: 04/09/18	TERMS: SHIP BY: NET 30 DAYS 27 ENGLEHARD DRIVE MONROE TWP NJ 08831	CUST ORD NO.: P0039511 SHIPPI NG POINT COMMON CARRIER VIAS: PREPAID FREIGHT: RELEASE NO.: RECEIVING PHONE:
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ORDER NO.: 60654053 FROM: CRAN PAGE 3

O'Neal High-Performance Metals Group

METALS
ML

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ABNAHMEPRÜFZEUGNIS EN 10204-3.1
INSPECTION CERTIFICATE EN 10204-3.1
CERTIFICATE DE RECEPTION EN 10204-3.1

EN 10204-2005-01

Benteler Steel/Tube GmbH - Postfach 1340 - 33043 Paderborn - Deutschland
TW Metals
The Aboretum, Suite 204
760 Constitution Drive
EXTON PA 19341
USA

Dokument-Nr.: 41-1005860/001/Z
Document No.:
No. du document:
No. de commande du client:
Purchase Order No.:
Benteler Order No.:
No. de commande Benteler:
Vie sandanzieger-Nr.:
Dispatch Note No.:
No. d'avis d'expédition:

Prüf-Nr.:
Inspection No.:
No. du certificat:
No. de certificat:
Hesteller:
Manufacturer:
Producent:
Herrstellerzeichen:
Manufacturer's brand:
Marque du producteur:
Stamp of the inspection representative:
Polycopie du contrôleur:

IPED 201465/EU CERTIFIED BY TÜV NORD SYSTEMS



Produkt: NAHTLOSE STAHLRÖHRE
Produkt: SEAMLESS STEEL TUBE
Produkt: TUBES D' ACIER SANS Soudure

Stahlschmelzungsverfahren: ELEKTROSTAHL
Steelmaking process: ELECTRIC FURNACE
Procédé d'aboration de l'acier: FOUR ÉLECTRIQUE

AMS-T-6736B-08 Type 1, ASTM-A 519-2006, MIL-T-6736B Type 1, AMS6360 Rev. M, AMS 2301K

Lieferbedingungen:

Terms of delivery:

Conditions de livraison:

Dimensions-tolerances:

Stahlsorte:

Steel grade:

Nuance d'acier:

GRADE 4130

TW METALS
T E JUN 13 2017 P
S R
T S
ACCEPTED BY

Produktkennzeichnung: FSD: BENTELER AMS6360M-AMS-T-6736 B-1-MIL-T-6736 B-1-AMS 2301K Condition N HEAT-NO.
CD AQS DIMENSIONS WA GERMANY

Product marking:

Markage du produit:

AEZ = Ausführungsbeschreibung, Etching, Ink marking, Gravure à l'encre , FK = Farbmarkierung, paint, stamping, marquage par couleur , FSD = Farbmarkierung, paint, stamping, marquage par peinture , FSD = Farbmarkierung, Color ist printer, imprimeur à l'encre de couleur , UK = Ladekennzeichnung, Laser marking, Marquage laser , PKE = Einkerbmarkierung, ind marking, marquage sur échancrure , PS = Prägemarkierung, die stamp, marquage par optimomage , TS = Testauskennzeichnung, ink ist spray marking, imprimeur à la peinture , d'Inkce .

ABNAHMEPRÜFZEUGNIS EN 10204-3.1

INSPECTION CERTIFICATE EN 10204-3.1
 CERTIFICAT DE RECEPTION EN 10204-3.1

Dokument-Nr.: 41-1005860/001/Z
 Document No.:
 No. du document:

Prüf-Nr.:
 Inspection No.:
 No. du certificat:

Blatt: 2 / 3
 Page: 2 / 3
 Page:

Pos.	Stück	Maße	Gesamtlänge	Gewicht	Schmelzen-Nr.	Prüfdruck	Rohr-Nr.-Gruppe	Vielfachlängen
Pos.	Item	Number	Dimensions	Length total	Weight	Heat No.	Test pressure	Tube number group
Pos.	Item	Number	Dimensions	Longueur totale	Poids	No. de coulée	Pression d'épreuve	Série de no. des tubes
0009	20	0,750" O.D. * 0,083" WT	1830,71	1067	603114	feet	lbs	Multiple lengths Longueurs multiples
		2,0 FT - 24 FT						

Schmelzenanalyse [%] / Heat analysis [%] / Analyse sur coulée [%]

Pos.	Schmelzen-Nr.	C	Si	Mn	P	S	Cr	Mo	Ni	Cu
Pos.	Heat No.	C	Si	Mn	P	S	Cr	Mo	Ni	Cu
Pos.	No. de coulée									
0009	603114	0,310	0,240	0,56	0,005	0,001	0,87	0,17	0,08	0,11

Produktanalyse [%] / Product analysis [%] / Analyse sur produit [%]

Pos. Schmelzen-Nr. C Si Mn P S Cr Mo Ni Cu

Item Heat No.

Poste No. de coulée

Die Rohre wurden zerstörungsfrei geprüft:

The tubes are non destructive tested:

Les tubes ont passé un essai non destructif:

ET-test: acc. to ASTM-A 450; ET" Test method: acc. to ASTM-E 309; for imperfections; PASSED
 ET-test: ET with rotating pancake coils; according to EN 10246-3; imperfections;
 Notch depth: 0,30 mm; notch width < = notch depth; notch length min. 2 x transducer
 width (max. 50 mm)

Augensichtskontrolle: PASSED Materialverwechslungsprüfung: PASSED Maßkontrolle: PASSED
 Visual inspection: Material conformity test: Dimensions examination: PASSED
 Examen visuel: Vérification de la nuance: Vérification des dimensions:

Ergebnisse der mechanischen Prüfung / Results of mechanical testing / Résultats des essais mécaniques

Die Probenahme erfolgte an Vielfachlängen.
 The sampling was carried out on multiple lengths.

L'échantillonage a été réalisé aux longueurs multiples.

ABNAHMEPRÜFZEUGNIS EN 10204-3.1
INSPECTION CERTIFICATE EN 10204-3.1
CERTIFICAT DE RECEPTION EN 10204-3.1

Zugversuch rings bei RT, Vollprobe / Tensile test longitudinal at RT, Full section test specimen / Essai de traction longitudinale à TA, Épreuve de section complète

Pos.	Proben-Nr.	Schmelzen-Nr.	Probenabmessung	Streckgrenze	Zugfestigkeit	Dehnung
Pos.	Item	Specimen No.	Heat No.	Specimen dimensions	Tensile strength	Elongation
Exigences	Requirements	No. de l'éprouv.	No. de coulée	Dimensions de l'éprouv.	Limite élastique	Résistance à la traction. Allongement
0009	0.0001	603114	19,04 x 19,04 x 2,12	1.02	Rp 0,2 % KSI MIN 75	Rm KSI MIN 95
0009	0.0002	603114	19,04 x 2,12	1.03	123	123
					18,00	19,00

Rändenkohlung / Surface decarburization / Décarburation superficielle

Pos. / Item / Poste: 0009

acc. to AMS-6360, partial decarburization outside max. 0,014 in., partial decarburization outside and inside max. 0,014 in., partial decarburization outside and inside max. 0,457 mm, without total decarburization; partial decarb. out. max.: 0,356 mm; partial decarb. ins. max.: 0,356 mm

Vermerk / Remark / Remarque

Pos. / Item / Poste: 0009

Certificate remarks: The steel grade corresponds to ~~MIT-T-6736B~~, AMS 6360M, material free from mercury contamination, FAR BAA: 52.225-1 CANNOT COMPLY, DFARS BAA: 252.225-7001 CAN COMPLY, FAR TAA: 52.225-5 CAN COMPLY, No weld repair has been carried out.

Country of origin of the material and heat: Germany, Aircraft quality steel acc. to AMS 2301K; see appendix page 1 of 1

Pos. / Item / Poste: 0009

Macroscopic examination: acc. to ASTM-E 381

Pos. / Item / Poste: 0009

Magnetic particle inspec.: acc. to AMS 2301K/ASTM-E 1444, on prematerial.

Pos. / Item / Poste: 0009

Grain size: acc. to ASTM-E 112; Grain size and finer: 5; Grain size: Longitudinal structure micrography, on prematerial

Verkäufer(in) / Sales Personnel / Personne chargée : Mr Schwarz, Tel.: 05254.81-204311, Fax: 204391

Paderborn Schloß Neuhaus; 19.05.2017, TEL.: 05254.81-201767 FAX: 05254.81-201752

Abnahmeverantwortlicher
Contôleur
I. A. THOMAS GOLLAN / TEM

Inspektion representativ

Berteler Steel/Tube GmbH
Residenzstraße 1
33104 Paderborn
Germany
Tel.: 05254.81-0 Fax: 49.5254.13666

BERTELER ▄

Steel/Tube

Abnahmeprüfzeugnis EN 10204-3.1 / Anhang
Inspection Certificate EN 10204-3.1 / appendix
Certificat de réception EN 10204-3.1 / appendix

Dokument-Nr.
Document No.: 41-1005860/001/Z
No. de document:

Blatt:
Page: 1 of 1
Page: de

Halbzeuguntersuchung: Stahlsorte 4130 / Semi finished product examination: grade 4130 / Produit semi-fin: nuance 4130

Schmelzen-Nr. Heat No. Coulée No.	Position Item Postie	Körngröße Grain size Grosseur de grain (ASTM-E 112)	Härtbarkeit (min. Anforderungen) Temperabilité (exigence min.) (ASTM-A 255)	Magnetpulverprüfung Essai à la poudre magnétique (AMS 2301 K/ASTM-1444)		Makrostruktur Macrostructure test (ASTM-E 381)					
				min. 5	J(5)(16") min. 35 HRC	J(8)(16") min. 28 HRC	F max. 0,34	S max. 0,25	max. S2	max. R1	max. C2
603114	009	9	40	32	0,020	0,015	S2	R1	C2		
Decarburization Depth		Outside 0,000 mm	Inside 0,000 mm								

Der Stahl ist frei von Quecksilberverunreinigungen. / The steel is free of mercury contamination. / L'acier est libre des contaminations de mercure.

Abnahmevertragsinhaber
Inspection representative
Contrôleur

Thomas Gollan

Paderborn Schloß Neuhaus, 19.05.2017
Tel.: (0)5254.81-201760 Fax: (0)5254.81-201752

Quality Assurance

I certify that the results are a true and correct copy of the records prepared and maintained by Plymouth Tube Company, Steele in compliance with the requirements of the cited specification. Chemistry is as reported by the Steel supplier. This test report cannot be reproduced or distributed except in full without the written permission of Plymouth Tube.

John D. Hassett

End of Certification

The material in this test report is:

- 1) Drawn in the USA
- 2) Free from Polybrominated Biphenyls (PBB),
- 3) NAFTA compliant.

Others (PbDE), and Mercury contamination.

Polybrominated Diphenyl

This test report data is for the heat Chemistry Stated above.

CUSTOMER P.O.	CUSTOMER PART	QUANTITY	LADING NO	CERT ID / REV	CERT DATE	PART DESCRIPTION	HO7500490J0002
M 49380066	33047	3,078.5	# 00098303	01	01/25/2018		

SHIP TO
 TW Metals
 27 Englehardt Drive
 Monroe Township, NJ 08831
 USA

WORK ORDER 022738
 HEAT NUMBER 606101
 MELT SOURCE Benteler Steel & Tube-Germany



TRUST YOUR SOURCE ACCEPT NO SUBSTITUTIONS!
 Phone: (816) 673-1615 Fax: (816) 672-7343



158452 - 1 / 1

SALES ORDER - LINE / RLS

PRODUCT CERTIFICATION

Date Printed: 01/25/2018

MIL TEST REPORT

Producer of Premium Stainless Steel Seamless Tubes

PUFATM

Purchaser: TW METALS-Cambury
Certificate No.: 2017-8-81

Process: Gold Drawn

Hemical Composition by Weight (%)

Process: Cold Drawn		Commodity: Steel Seamless Tubes		Specifications: ASTM A213-17/ASME SA213-15/ASTM A269-15a BAW		Delivery Condition: OD Polished to 240 grit		Steel Grade	
Heat Number	Lot	Dimensions		Quantity	Fleet	Pieces	7-45	YX1608-590	TP304/TP304L
		Number	Dimensions						
1/2"x0.035"x20.	2500	50,000							

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in

GC 18 INSPECTION		ENGINEERING SIGNOFF (if required)
INSPECTED BY:	11	SIGNED OFF BY:
DAS		DATE: 9-09 APR 11 2018
Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in		

RECORD RESULTS BELOW					
CUT SAMPLE PIECE OF MATERIAL AND FORM A HARDNESS CHECK					
TYPE OF MATERIAL	HRc	HRB	DUR A	DUR D	WEBSTER
	SIZE OF TEST SAMPLE				
	HARDNESS / DUROMETER READING				
TESTERS LOCATED IN THE QUALITY OFFICE					

DESCRIPTION	NCR (Check Y/N)	COMMENTS
SURFACE DAMAGE	Y N	
CORRECT FINISH	Y N	
CORRECT THICKNESS	Y N	
CORRECT MATERIAL DRAWING	Y N	
PHOTO REQUIRED	Y N	
CORRECT MATERIAL IDENTIFICATION	Y N	
CORRECT M# ON THE MATERIAL	Y N	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	Y N	
DOES THIS REQUIRE AN ENGINEERING SIGN OFF	Y N	
EXTRUSION REPORT		
TESTERS LOCATED IN THE QUALITY OFFICE		

MATERIAL CERT REC'D: W.083 DATE: APR 11 2018
 QUANTITY RECEIVED: 20 SHEET SIZE ORDERED: W.083
 QUANTITY INSPECTED: 20 SHEET SIZE RECEIVED: W.083
 MATERIAL CERT REC'D: W.083 DATE: APR 11 2018
 QUANTITY RECEIVED: 20 SHEET SIZE ORDERED: W.083
 QUANTITY INSPECTED: 20 SHEET SIZE RECEIVED: W.083

MATERIAL: 141301X1750W083 PO / BATCH NO: 03511/5060104
 DATE: APR 11 2018

SPECIFICATION CONTROL DRAWING

PURCHASE MATERIAL: ANSI/AISI 4130N SEAMLESS STEEL TUBING

SPECIFICATION: MIL-T-6736 OR AMS 6371, 6360, 6361, 6362, 6323, 6374

PART NUMBER: M4130NT.DDDD W. TTT

WHERE: "DDDD" = OUTER DIAMETER (IN INCHES)
AND "TTT" = WALL THICKNESS (IN INCHES)

DIA. WALL

EG. 3/4" TUBING WITH .035" WALL = M4130NT.750W.035

RELEASE
2012-04-16
AP

B		REFORMAT DIMS TO ACCOMMODATE ADDITIONAL TUBE		R/P	12-04-02
A	REV	NEW ISSUE		BY	01-25-16
DESIGN	DRAWN	JB	DESCRIPTION	DATE	
CHECKED	AP	RP	DRAWING NO. HAWKESBURY, ONTARIO, CANADA		
MFG. APPR.	AP	M4130NT	TITLE	REV. B	SHEET 1 OF 1
APPROVED	<i>AP</i>	STEEL TUBING	SCALE	NTS	
DE APPR.					
DATE	12-04-02				

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PRINTED ON 04/16/2012

Attach this inspection sheet to the corresponding material cert and remit to be scanned and received in

GC 18 INSPECTION		ENGINEERING SIGN OFF (if required)
INSPECTED BY:	SIGNED OFF BY:	DATE: APR 11 2018 9-69 11
ATTACH THIS INSPECTION SHEET TO THE CORRESPONDING MATERIAL CERT AND REMIT TO BE SCANNED AND RECEIVED IN		

RECORD RESULTS BELOW					
TYPE OF MATERIAL	HR C	HR B	DUR A	DUR D	WEBSTER
	SIZE OF TEST SAMPLE				
	HARDNESS / DUROMETER READING				

DESCRIPTION	NCR (Check Y/N)	COMMENTS
SURFACE DAMAGE	<input checked="" type="checkbox"/>	
CORRECT FINISH	<input checked="" type="checkbox"/>	
CORROSION	<input checked="" type="checkbox"/>	
CORRECT THICKNESS	<input checked="" type="checkbox"/>	
PHOTO REQUIRED	<input checked="" type="checkbox"/>	
CORRECT MATERIAL IDENTIFICATION	<input checked="" type="checkbox"/>	
CORRECT M# ON THE MATERIAL	<input checked="" type="checkbox"/>	
ENGINEERING SIGN OFF	<input checked="" type="checkbox"/>	
DOES THIS MATERIAL REQUIRE AN ENGINEERING SIGN OFF	<input checked="" type="checkbox"/>	
EXTRUSION REPORT	<input checked="" type="checkbox"/>	
DOES THIS REQUIRE AN ENGINEERING SIGN OFF	<input checked="" type="checkbox"/>	
TESTS LOCATED IN THE QUALITY OFFICE		

MATERIAL CERT REC'D: Y
 QUANTITY RECEIVED: 23
 QUANTITY INSPECTED: 23
 SHEET SIZE ORDERED: W.O.A9
 SHEET SIZE RECEIVED: W.O.A9
 THICKNESS RECEIVED: W.O.A9
 THICKNESS ORDERED: W.O.A9
 MATERIAL CERT REC'D: Y
 QUANTITY RECEIVED: 23
 QUANTITY INSPECTED: 23
 SHEET SIZE ORDERED: W.O.A9
 SHEET SIZE RECEIVED: W.O.A9

MATERIAL: M4130Wf0.250W0.09
 PO / BATCH NO: 039511/5060103
 DATE: APR 11 2018

SPECIFICATION CONTROL DRAWING

PURCHASE MATERIAL: ~~ANSI/AISI 4130N~~ SEAMLESS STEEL TUBING

SPECIFICATION: ~~MIL-T-6736~~ OR AAMS 6371, 6360, 6361, 6362, 6373, 6374

PART NUMBER: ~~M4130N~~ **D.DDDW.TTT** WHERE: "D.DDD" = OUTER DIAMETER (IN INCHES)
DIA. **WALL** AND ".TTT" = WALL THICKNESS (IN INCHES)

EG. 3/4" TUBING WITH .035" WALL = M4130N0.750W.035

B	REFORMAT DWG TO ACCOMODATE ADDITIONAL TUBE	RP	12.04.02
A	NEW ISSUE	JB	01.05.16
REV		BY	DATE
DESIGN	JB	DESCRIPTION	
DRAWN	RP		
CHECKED	AP	DRAWING NO.	
MFG. APPR.		HAWTHORPE, ONTARIO CANADA	
APPROVED		REV. B	SHEET 1 OF 1
DE APPR.		TITLE	SCALE
DATE	12.04.02	STEEL TUBING	NTS

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RELEASE
2012-04-16

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GC 18 INSPECTION		ENGINEERING SIGNOFF (if required)
INSPECTED BY:	SIGNED OFF BY:	DATE: 9-89 APR 11 2018
DAS		

CUT SAMPLE PIECE OF MATERIAL AND PERFORM A HARDNESS CHECK.					
RECORD RESULTS BELOW					
TYPE OF MATERIAL	HRC	HRB	DUR A	DUR D	WEBSTER
	SIZE OF TEST SAMPLE				
	HARDNESS / DUROMETER READING				
	TESTERS LOCATED IN THE QUALITY OFFICE				

DESCRIPTION	NCR (Check Y/N)	COMMENTS
SURFACE DAMAGE	Y (N)	
CORRECT FINISH	Y (N)	
CORROSION	Y (N)	
CORRECT GRAIN DIRECTION	Y (N)	
CORRECT MATERIAL PER-DRAWING	Y (N)	
CORRECT THICKNESS	Y (N)	
PHOTO REQUIRED	Y (N)	
CORRECT MATERIAL IDENTIFICATION	Y (N)	
CORRECT REF # TO LINK CERT	Y (N)	
CORRECT M# ON THE MATERIAL	Y (N)	
ENGINEERING SIGN OFF	Y (N)	
DOES THIS MATERIAL REQUIRE	Y (N)	
DOES THIS REQUIRE AN	Y (N)	
EXTRUSION REPORT	Y (N)	

MATERIAL CERT REC'D: W.035 DATE: APR 11 2018
 QUANTITY RECEIVED: 80 SHEET SIZE ORDERED: 80
 QUANTITY INSPECTED: 80 SHEET SIZE RECEIVED: 80
 THICKNESS RECEIVED: W.035 QUANTITY REJECTED: 0
 THICKNESS ORDERED: W.035 SHEET SIZE RECEIVED: 80
 N/A

MATERIAL: M364TRG300W.035 PO / BATCH NO.: Q3931/S060102
 DATE: APR 11 2018

SPECIFICATION CONTROL DRAWING

D

D

PURCHASE MATERIAL: AISI 304/316 SS SEAMLESS ROUND TUBING
 SPECIFICATION: ASTM A213 OR ASME SA213 OR ASTM A269



WALL THICKNESS TOLERANCE PER ASTM A269 AS FOLLOWS:

OD (IN)	OD TOL. (IN)	WALL TOL.
UP TO $\frac{1}{2}$	± 0.005	$\pm 15\%$
$\frac{1}{2}$ TO $1\frac{1}{2}$	± 0.005	$\pm 10\%$
$1\frac{1}{2}$ TO $3\frac{1}{2}$	± 0.010	$\pm 10\%$
$3\frac{1}{2}$ TO $5\frac{1}{2}$	± 0.015	$\pm 10\%$
$5\frac{1}{2}$ TO 8 EXCL.	± 0.030	$\pm 10\%$

PART NUMBER:

M304TR|OD|WALL|TTT

WHERE "D, DDD" = OUTSIDE DIAMETER IN INCHES
 AND "TTT" = WALL THICKNESS IN INCHES

EG. 0.375" OD X 0.065" WALL TUBING = M304TR.375W.065

C

C

B

B

A

A

B	REFORMAT DWG ADD SPECS (ZN DB-1), REF PAR 08-120A	CP	08 10 20
A	NEW ISSUE	DS	01 08 08
REV	DESCRIPTION	BY	DATE
DESIGN	DART AEROSPACE LTD		
DRAWN			
CHECKED			
MFG. APPR.			
APPROVED			
DE APPR.			
DATE	08.10.20		

RE-RELEASED

DRAWING NO. M304TR SHEET 1 OF 1
 TITLE 304/316 ROUND TUBING
 SCALE NTS
 DATE 08.10.20
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